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Perturbations in a Superfluid Liquid in the Kaluza–Klein Theory in the Absence of the Cylindricity Condition

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Abstract

© 2015, Springer Science+Business Media New York. The hypothesis of a superfluid state of a gas containing dark energy structure (in the “quintessence” model), incorporating physical notions of the fifth dimension, is introduced. On this basis a solution has been obtained for the Einstein equations in five-dimensional space in the absence of the cylindricity condition, which defines the influence of the field of the given spacetime on the parameters of the superfluid liquid obtained by P. L. Kapitsa and L. D. Landau.

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Keywords

dark energy, energy and momentum, fifth coordinate, graviton, perturbation, reactive potential, spacetime, superfluidity, variable mass